REMARKS/ARGUMENTS

Claims 25 and 27-33 are pending. For convenience, the Examiner's rejections are addressed in the order presented in an October 18, 2004 Office Action with consideration given to the Examiner's remarks in a March 3, 2005 advisory action.

I. Rejections under 35 U.S.C. §101

Claims 25 and 27-33 are rejected under 35 U.S.C. §101 as allegedly lacking a specific and substantial utility. Applicants continue to assert that the claimed Mkinase nucleic acids encoding Mkinase proteins have utility as diagnostic agents to detect cancer. Applicants refer the Examiner to exhibits and arguments made in a response filed on February 18, 2005. As the Exhibits and arguments were entered, they are not repeated in this response.

Applicants respectfully assert that the encoded Mkinase protein has the additional specific and substantial utility of binding to TRAF4 protein. This property of the encoded Mkinase protein can be used for, *e.g.*, TRAF4 detection or purification. TRAF4, as is well known, is a member of the tumor necrosis factor receptor factor family. TRAF4 expression is observed in, *e.g.*, breast carcinomas. *See, e.g.*, specification at page 4, line 31 through page 5, line 5. TRAF proteins are known to regulate CD40 signaling through TRAF binding sites. *See, e.g.*, specification at page 5, lines 6-9.

Binding of Mkinase to TRAF4 is asserted throughout the specification, for example, at page 4, line 21; page27, lines 20-22; and at page 33, lines 16-20. Attachment of Mkinase to a solid support to isolate binding partners, *e.g.*, TRAF4, is asserted at, *e.g.*, page 27, line 24 through page 28, line 10. Labeling of Mkinase to allow detection of binding partners is asserted at, *e.g.*, page 19, lines 30 through page 20, line 6 and at page 28, lines 25-31.

The application, therefore, provides at least two asserted utilities for the Mkinase protein and its related and claimed nucleic acids. Mkinase proteins and nucleic acids have utility on their own because of the association of the chromosomal Mkinase gene with certain cancers. This utility is described in detail in previously submitted response. In addition, the encoded Mkinase protein has the useful property of binding to the TRAF4 protein. TRAF4 has been

reported to overexpressed in certain cancers. *See, e.g.*, specification at page 4, line 31 through page 5, line 5 and references cited therein. On reading the specification, one of skill in the art would recognize these asserted utilities of Mkinase nucleic acids and encoded proteins. In view of the asserted Mkinase utilities, withdrawal of the rejections under 35 U.S.C. §101 is respectfully requested.

II. Rejections under 35 U.S.C. §112, first paragraph, enablement

Claims 25 and 27-33 are rejected under 35 U.S.C. §112, first paragraph as allegedly lacking enablement. Specifically, the Office Action alleges that the claimed invention is not supported by either a specific and substantial asserted utility or a well-established utility, and that because of the alleged lack of utility, one of skill would not know how the use the claimed invention.

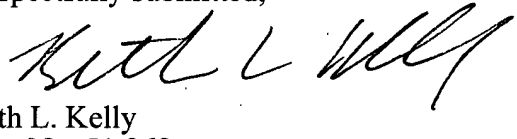
Applicants have submitted arguments in support of the Mkinase utility asserted in the application as filed in Section I of this response. In view of those arguments, Applicants respectfully request that the rejection under 35 U.S.C. §112, first paragraph also be withdrawn.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,



Beth L. Kelly
Reg. No. 51,868

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 415-576-0200
Fax: 415-576-0300
Attachments
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